Contents

ALCOHOL AND FREE RADICALS

FREE RADICAL MECHANISMS IN TISSUE INJURY WITH SPECIAL REFERENCE TO THE CYTOTOXIC EFFECTS OF ETHANOL AND RELATED ALCOHOLS 1
T F Slater

RADIOLYTIC STUDY OF α TOCOPHERYLQUINONE REDUCTION IN ETHANOLIC SOLUTION 11
D Jore, B Champion, L K Patterson and C Ferradini

SPIN TRAPPING OF ETHANOL DERIVED FREE RADICALS IN RAT LIVER MICROSOMES 17
E Albano, A Tomasi, L Goria-Gatti, G Poli and M U Dianzani

CHRONIC IRON OVERLOAD AND ETHANOL ELIMINATION IN THE RAT 23
C Ribière, C Saffar, D Sabourault, M Bourel
P Brissot and R Nordmann

SUPEROXIDE PRODUCTION BY MOUSE ALVEOLAR MACROPHAGES AFTER ACUTE ALCOHOLIZATION 29
C Libon, J Cotte-Laffitte, F Forestier, C Labarre
and A M Quéro

ROLE OF FREE RADICAL-MEDIATED REACTIONS IN ETHANOL-INDUCED LIVER DAMAGE 35
M U Dianzani

LIPID PEROXIDATION DEPENDENT ON ETHANOL-INDUCIBLE CYTOCHROME P-450 FROM RAT LIVER 43
M Ingelman-Sundberg, G Ekström and N Tindberg

EFFECTS OF ETHANOL ON HEPATIC AND CEREBELLAR LIPID PEROXIDATION AND ENDOGENOUS ANTIOXIDANTS IN NAIVE AND CHRONIC IRON OVERLOADED RATS 49
H Rouach, M K Park, M T Orfanelli, B Janvier,
P Brissot, M Bourel and R Nordmann

DIENE CONJUGATION IN CHRONIC ALCOHOLICS 55
T L Dormandy

FLUORESCENT ALDEHYDE-PROTEIN ADDUCTS IN THE BLOOD SERUM OF HEALTHY ALCOHOLICS 61
R Carini, R Mazzanti, F Biasi, E Chiarpotto, G Marmo
S Moscarella, P Gentillini, M U Dianzani and G Poli

DEFENSE LINES AGAINST REACTIVE OXYGEN SPECIES 65
H Sies

DRUG ACTIVATION AND DETOXICATION CAPACITY : IMBALANCE IN PERIVENOUS HEPATOCYTES 73
K O Lindros, Y Kera and K E Penttilä

ALCOHOL EFFECT ON SUPEROXIDE DISMUTASE ACTIVITY IN NERVOUS TISSUE 79
M Ledig, P Kopp and P Mandel

KINETICS OF α-TOCOPHEROL IN CONTROL AND ALCOHOL-FED RATS 87
A Bjørneboe, G-E Aa Bjørneboe and C A Drevon

NUTRITIONAL, SELENIUM AND α-TOCOPHEROL STATUS OF ALCOHOL ABUSERS WITH AND WITHOUT CHRONIC SKELETAL MUSCLE MYOPATHY 93
R J Ward, P D Duane and T J Peters

OXIDATIVE STRESS IN PATIENTS WITH ALCOHOL-INDUCED LIVER INJURIES ASSAYED BY BIOLOGICAL MARKERS 97
D Bonnefont, J Emerit, M H Perrollaz, D Tosoni-Verlingue, O Ribière, J Delattre and A Galli

THE RELATIONSHIP BETWEEN LIPID COMPOSITION AND LIPID PEROXIDATION OF ERYTHROCYTES FROM ALCOHOLICS 101
M R Clemens

SERUM AND ERYTHROCYTE SELENIUM, SERUM ZINC AND COPPER IN ALCOHOLICS WITH AND WITHOUT ABNORMAL LIVER FUNCTION TESTS 107
C Conri, B Fleury, M Simonoff, G Ducloux B Berdeu and P Moretto

Cu,Zn-SOD CONTENT IN ERYTHROCYTES OF PATIENTS WITH ALCOHOL-INDUCED LIVER INJURY 111
J Emerit, D Bonnefont, D Tosoni-Verlingue, J Delattre, A Galli, O Ribière and F Congy

MECHANISMS OF HEMOLYTIC EFFECT OF COPPER 115
A Fernandes, L Mira, M Azevedo and C Manso

IMMUNOGENICITY OF PROTEINS REACTED WITH MALONIC DIALDEHYDE (MDA) 121
J F Kergonou, E Bruna, I Pennacino and R Ducousso

SUPEROXIDE DISMUTASE ACTIVITY IN ERYTHROCYTES OF ALCOHOLIC PATIENTS 125
M Ledig, S Doffoel and M Doffoel

URINARY MALONDIALDEHYDE LEVELS IN A GROUP OF CHRONIC ALCOHOLICS MEASUREMENT BY A GAS LIQUID CHROMATOGRAPHIC ASSAY 131
M Beljean-Leymarie and E Bruna

INFLUENCE OF ALLOPURINOL AND DESFERRIOXAMINE ON THE ETHANOL-INDUCED OXIDATIVE STRESS IN RAT LIVER AND CEREBELLUM 135
M K Park, H Rouach, M T Orfanelli, B Janvier and R Nordmann

SCAVENGING PROPERTIES OF DESFERRIOXAMINE (DFO) TOWARDS SUPEROXIDE RADICALS : CONTRIBUTION TO ITS EFFECTS ON ETHANOL METABOLISM AND TOXICITY 141
D Sabourault, C Ribière, C Houée-Levin, C Ferradini and R Nordmann

PREVENTION BY ALLOPURINOL OF THE ETHANOL-INDUCED DISTURBANCES IN BRAIN MITOCHONDRIAL ELECTRON TRANSPORT CHAIN AND SUPEROXIDE DISMUTASE ACTIVITY 147
C Saffar, C Ribière, D Sabourault and R Nordmann

SUPEROXIDE RADICAL PRODUCTION AND GLUTATHIONE CONJUGATING ENZYMES IN HEPATIC MICROSOMES ISOLATED FROM HYPERTHYROID RATS 153
H W Sippel

INCREASE IN THE CCl_4 RADICAL INDUCED EFFECTS ON THE RAT LIVER MICROSOMES AFTER CHRONIC ETHANOL INTAKE DURING GESTATION 159
C Cambon-Gros, D Lopez-Tejero, Y Fernandez, G Vilarem and S Mitjavila

ENHANCEMENT OF ETHANOL-INDUCED HEPATOTOXICITY BY HYPOXIA 165
M Younes and O Strubelt

ACETALDEHYDE AND ALDEHYDE DEHYDROGENASE

A SIMPLE AND RAPID METHOD FOR THE PURIFICATION OF ALDEHYDE DEHYDROGENASE ISOZYMES FROM HUMAN LIVER 171
R Eckey, D P Agarwal, T Volkens and H W Goedde

DESFERRIOXAMINE : A METHOD TO DECREASE THE ARTEFACTUAL FORMATION OF ACETALDEHYDE FROM ETHANOL IN HUMAN BLOOD SAMPLES 177
M C George, D Lucas, C Ribière, J F Ménez, H H Floch and R Nordmann

ACETALDEHYDE RELEASED FROM HAEMOGLOBIN BY HYDROLYSIS IN CONTROLS AND ALCOHOLICS 183
D Lucas, J F Ménez, L G Bardou and H H Floch

SUBCELLULAR DISTRIBUTION OF LIVER ALDEHYDE DEHYDROGENASE IN ALCOHOLICS AND NONALCOHOLICS 189
D Meier-Tackmann, D P Agarwal, G C Korenke and H W Goedde

DETERMINATION OF TWO FORMS OF ACETALDEHYDE (AcHO) IN RATS AFTER INHALATION OF AcHO FOR A 21 DAY PERIOD 195
C Roumec, D Lucas, J F Ménez and Y Lamboeuf

SYNAPTOSOMAL PHOSPHOLIPIDS IN RATS CHRONICALLY TREATED WITH ACETALDEHYDE 201
C Roumec, Y Lamboeuf and G de Saint Blanquat

ERYTHROCYTE ALDEHYDE DEHYDROGENASE ACTIVITY IN ALCOHOLISM : IN VITRO EFFECT OF HYDROGEN PEROXIDE AND GLUTATHIONE 207
T Volkens, R Eckey, D P Agarwal and H W Goedde

ETHANOL METABOLISM AND TOXICITY

EFFECT OF ETHANOL INTOXICATION ON THE LEVELS OF DOLICHOLS IN RAT LIVER GOLGI APPARATUS 213
D Cottalasso, M A Pronzato, U M Marinari and G Nanni

ETHANOL-INDUCIBLE CYTOCHROME P-450 FROM HUMAN LIVER 219
G Ekström, C von Bahr and M Ingelman-Sundberg

IMPAIRED ETHANOL METABOLISM WITH ADVANCING AGE IN FEMALE RATS : STUDIES ON ITS MECHANISM 225
J Gellert, B Geisbüsch and R Teschke

ETHANOL-, FASTING- AND ACETONE-INDUCIBLE CYTOCHROMES P-450 IN RAT LIVER 231
I Johansson, B Scholte, E Eliasson and M Ingelman-Sundberg

DOES ENHANCED METABOLISM INCREASE ETHANOL TOXICITY IN MAN ? 237
G Thomas, C Girre, S Dally and G Pequignot

PHOSPHORUS-31 NUCLEAR MAGNETIC RESONANCE STUDY OF HEPATIC METABOLISM DURING ACUTE AND CHRONIC ALCOHOL TREATMENT IN THE RAT 241
P Canioni, F Desmoulin, A Gérolami and P J Cozzone

EFFECT OF EXERCISE ON ETHANOL METABOLISM AFTER INGESTION OF TWO DOSES OF ^{13}C ETHANOL 247
C Sautier, J Bricout, C Flament, C Doucet, J Koziet, P Letonturier and D Lemonnier

MEMBRANES AND RECEPTORS

INFLUENCE OF ETHANOL ON THE ADENOSINE RECEPTOR-N_i-COUPLED ADENYLATE CYCLASE SYSTEM IN RAT BRAIN CORTEX IN VITRO 253
F Bauché, A M Bourdeaux-Jaubert, R Nordmann and Y Giudicelli

ERYTHROCYTE PHOSPHOLIPID FATTY ACID TURNOVER IN CHRONIC ALCOHOLIC PATIENTS 259
M Gastaldi, B Lerique and J Boyer

AGE-DEPENDENT EFFECTS OF ETHANOL ON THE INTRANUCLEAR IONIC CONTENT OF HIPPOCAMPAL CA1 PYRAMIDAL CELLS 263
C Bertoni-Freddari, W Meier-Ruge and J Ulrich

EFFECT OF ETHANOL ON THE DEVELOPMENT OF ASTROCYTES IN PRIMARY CULTURE 269
J Renau-Piqueras, M Sancho-Tello, R Zaragozá and C Guerri

ETHANOL CONSUMPTION

EFFECTS OF ACUTE ETHANOL CONSUMPTION ON TRYPTOPHAN METABOLISM AND DISPOSITION BY FASTING NORMAL MALE VOLUNTEERS 275
A A-B Badawy, C J Morgan, D M Bradley, D R Thomas and J W T Lovett

DIFFERENTIAL EFFECTS OF CAERULEIN AND BOMBESIN NEUROPEPTIDES ON THE ETHANOL CONSUMPTION IN RATS 281
M Gewiss, F Pecher and Ph De Witte

RELATIONSHIP BETWEEN BEHAVIORAL DEPENDENCE AND MEMBRANE CHARACTERISTICS 287
B Le Bourhis, G Aufrère, F Beaugé and E Niel

INFLUENCE OF AGE ON THE ETHANOL DRINKING PATTERN IN THE RAT 293
G Wahlström

HUMAN PATHOLOGY

CHANGES IN METABOLITES OF NEUROAMINES IN CSF DURING WITHDRAWAL IN ALCOHOLICS WITH HEPATHOPATHY 299
E Baccino, J Caroff, J F Ménez, J C Bigot, Y Prigent and H H Floch

CHANGES IN SEROTONIN UPTAKE AND STORAGE IN PLATELETS DURING WITHDRAWAL OF ALCOHOLICS WITH HEPATHOPATHY 305
E Baccino, J F Ménez, A Henry, J C Bigot, D Mottier and H H Floch

ABNORMAL PATTERN OF CEREBRAL BLOOD FLOW DISTRIBUTION IN YOUNG ALCOHOL ADDICTS 311
S Dally, A Luft, J C Ponsin, C Girre, H Mamo and E Fournier

PLASMA ENDOTOXIN CONCENTRATION IN CHRONIC ALCOHOLICS 315
H Fukui, J Ch Bode and Ch Bode

VARIATIONS IN THE PROPORTIONS OF MICROHETEROGENOUS FORMS OF HUMAN α 2-HS GLYCOPROTEIN IN ALCOHOLIC LIVER DISEASE 321
M Jezequel, N Seta, M Corbic, J Féger and G Durand

BLOOD LIPIDS MODIFICATIONS IN ALCOHOLIC PATIENTS, BEFORE AND AFTER WITHDRAWAL 325
F Paille, P Guérin and D Barrucand

STUDY OF SOCIAL SUPPORT IN A SAMPLE OF FRENCH ALCOHOLIC WOMEN 331
M Rémy, S Soukup-Stépan and A Tatossian

EVOLUTION OF DESIALOTRANSFERRIN IN DRINKERS DURING ALCOHOL DETOXICATION TREATMENT 337
F Schellenberg, A M Le Goff, C Bourdin and J Weill

EVALUATION OF THE CARBOHYDRATE DEFICIENT TRANSFERRIN IN THE DETECTION OF DRINKERS 343
F Schellenberg, J Y Bénard and J Weill

EFFECT OF ETHANOL ON OXYGEN UPTAKE BY ERYTHROCYTES FROM HEALTHY DONORS AND ALCOHOLICS 349
O Sire, R Nordmann and B Alpert

CARBOHYDRATE-DEFICIENT TRANSFERRIN (CDT) IN SERUM AS A MARKER OF HIGH ALCOHOL CONSUMPTION 353
H Stibler, S Borg, M Joustra and R Hultcrantz

ALCOHOL DOES NOT INDUCE HBV TOLERANCE : ALCOHOLICS ARE INFECTED LATER 359
P Chossegros, P Adeleine, P Chevallier, R Brette, M Chevallier and C Trepo

Subject index 365

Author index 369